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Original Article

TAMIS with partial excision of mesorectum and primary closure of rectal wound using vloc

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ABSTRACT

Background: Transanal Minimally Invasive Surgery has proven to be a viable alternative in the treatment of rectal tumors; however, rectal wound closure can be challenging. We describe our experience with this procedure using the vloc suture device.
Resume: Eight successful Transanal Minimally Invasive Surgery with primary wound closure using vloc were performed in 5 men, 62 years mean age; all cases had pre-operative diagnosis of adenoma with high-grade dysplasia. The surgical anatomic–pathologic results showed 6 adenomas with high-grade dysplasia and 2 well differentiated adenocarcinomas, limited to the upper third of the submucosa (pT1SM1) without lymphatic or vascular invasion. All lesions were resected with negative margins. No patient reported during follow-up rectal pain, fecal incontinence or bleeding.
Conclusion: The use of vloc in rectal wound closure during Transanal Minimally Invasive Surgery is secure and facilitates the procedure.

TAMIS com excisão parcial do mesorreto e fechamento primário da ferida retal usando vloc

Palavras-chave:
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RESUMO

Tema: Cirurgia Minimamente Invasiva Transanal (TAMIS) tem provado ser uma alternativa viável para o tratamento de tumores do reto, porém o fechamento da ferida retal pode ser desafiadante. Nós descrevemos nossa experiência com este procedimento utilizando o dispositivo de sutura vloc.
Resumo: Oito TAMIS foram realizados com sucesso com o fechamento primário da ferida usando vloc, cinco homens, com idade média de 62 anos, todos os casos tiveram diagnóstico pré-operatório de adenoma com displasia de alto grau. Os resultados anátomo-patológicos

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pós-operatório demonstraram: 6 adenomas com displasia de alto grau e 2 adenocarcinomas bem diferenciados, limitado ao terço superior da submucosa (pT1SM1), sem invasão linfática ou vascular. Todas as lesões foram ressecados com margens negativas. Nenhum paciente relatou durante o seguimento dor rectal, incontinência fecal ou sangramento.

Conclusão: O uso de vloc no fechamento da ferida retal durante TAMIS é seguro e facilita o procedimento.

Introduction

Transanal Endoscopic Surgery (TES) has been performed with traditional platforms such as TEM (Transanal Endoscopic Microsurgery) and TEO (Transanal Endoscopic Operation) and newer techniques like TAMIS (Transanal Minimally Invasive Surgery).[1,2]

TAMIS procedure is the transanal use of disposable multiple channels laparoscopic ports, associated with the use of ordinary laparoscopic equipment and CO_2 insufflation (pneumorectum). It can be performed with various devices like SILSTM port (Covidien), SSLTM (Ethicon), Gelpoint (Applied Medical) or adaptations of anal dilator with surgical gloves.[2]

The risk of lymph node involvement in adenocarcinomas limited to submucosa (pT1) is 10–34%.[3] Despite recent studies have shown that in the treatment of rectal adenocarcinoma, TES is associated with higher recurrence rates when compared to radical surgery (2.9–12% of the cases submitted to TES and 0.5% submitted to radical surgery),[4] overall survival rates did not differ between the two groups. This is probably because patients undergoing TES follow rigorous surveillance protocols and when relapse occurs, they are referred to radical surgery or adjuvant treatment. Multicenter study concluded that TEM can be beneficial in very selected cases of rectal cancer, taking into account the degree of penetration into the submucosa (pT1SM1), tumor diameter (less 3 cm), absence of lymphatic or vascular invasion and well differentiated tumor,[3,4] in this situation local recurrence rate of less than 5% was reported when treated by TES, which is similar to the results of radical surgery, but with a significant reduction in morbidity and mortality.

Variable rates of complications are reported with TES, especially related to suture dehiscence. This is more prevalent in patients undergoing neoadjuvant therapy therpy.[5]

TES has three steps. First step: initial transanal installation of the device, when performing TEM and TEO the introduction of a rigid surgical proctoscopy and hold it to the operating table; the patient will be positioned according to the location of the lesion; in TAMIS no attachment to the operating table is necessary and the device can be sutured to the perianal skin; usually it is possible to perform most procedures in the lithotomy position. Second step: excision, where in cases of partial thickness resection is not necessary to close the wound; we can easily identify the submucosa plane dissection with visualization of the circular orientation of the muscle fibers. In cases of Partial Mesorectal Excision (PME) with full thickness resection of rectal wall, the perirectal fat is also easily identified.[1]

Third step: in cases of PME, usually primary wound closure is indicated, although the possibility to leave it open without major complications is described. The realization of suture in a narrow operating field, where the conflict of tools frequently occurs, is tough and it is not always possible. Several techniques have been described: continuous sutures anchored with conventional laparoscopic or silver clips; automatic continuous sutures (endostich), separated stitches with extracorporeal knot, anchored stitches and closure using traditional anal retractors. The difficulty or impossibility of wound closure and the inadvertent opening of the abdominal cavity have been described for cases of conversion to traditional transanal surgery or laparotomy or laparoscopy.[6]

The objective of this study is to report the use of vloc device (Fig. 1) to close the rectal wound in TAMIS procedure.

Methods

Surgical technique installation of TAMIS

The patient underwent previous mechanical bowel preparation, and the procedure is performed under general anesthesia in the lithotomy position. The patient's position usually is

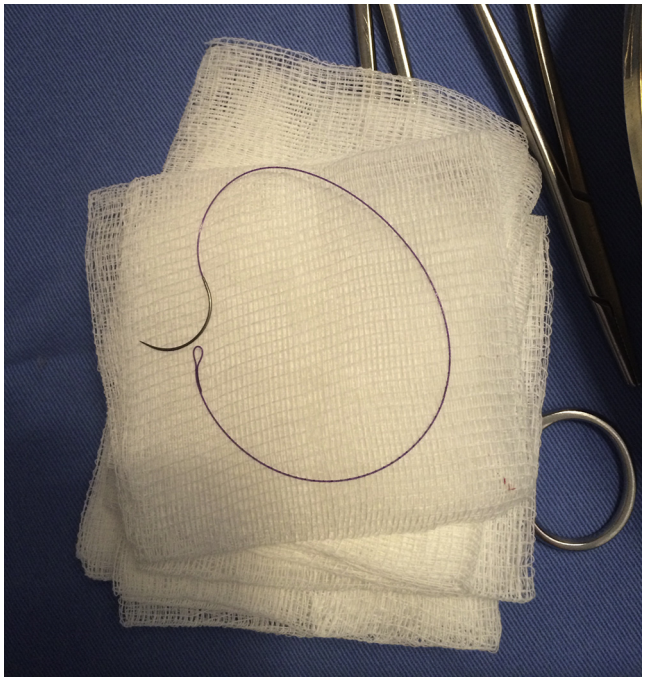

Fig. 1 – Vloc device.